March 2, 1843.

The MARQUIS OF NORTHAMPTON, President, in the Chair.

1. A paper was read, entitled, "On the Laws of Individual Tides at Southampton and at Ipswich." By G. B. Airy, Esq., M.A., F.R.S., Astronomer Royal.

The author gives the results of his own personal observations of the tides at Southampton and at Ipswich, in both of which places they present some remarkable peculiarities. In conducting these inquiries he obtained, through the favour of Colonel Colby, R.E., and Lieut. Yelland, R.E., the able assistance of non-commissioned officers and privates of the corps of Royal Sappers and Miners. He explains in detail the nature of his observations, and the method he pursued in constructing tables of mean results; and deduces from them the conclusion, that the peculiarities in the tides which are the object of his investigation are not dependent on any variations in the state of the atmosphere, but are probably connected with the laws which regulate the course of waves proceeding along canals.

2. A paper was in part read, entitled, "On the Special Function of the Skin." By Robert Willis, M.D. Communicated by John Bostock, M.D., F.R.S.

March 9, 1843.

Sir JOHN WILLIAM LUBBOCK, Bart., V.P. and Treasurer, in the Chair.

John Miers, Esq., was balloted for, and duly elected a Fellow of the Society.

1. The reading of a paper, entitled, "On the Special Function of the Skin." By Robert Willis, M.D. Communicated by John Bostock, M.D., F.R.S., was resumed and concluded.

The purpose which is answered in the animal economy by the cutaneous exhalation has not hitherto been correctly assigned by physiologists: the author believes it to be simply the elimination from the system of a certain quantity of pure water, and he considers that the saline and other ingredients which pass off at the same time by the skin are in too inconsiderable a quantity to deserve being taken into account. He combats by the following arguments the prevailing opinion, that this function is specially designed to reduce or to regulate the animal temperature. It has been clearly shown by the experiments of Delaroche and Berger, that the power which animals may possess of resisting the effects of a surrounding medium of high temperature is far inferior to that which has been commonly ascribed to them; for in chambers heated to 120° or 130° Fahr., the tempe-